

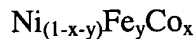
**AMENDMENTS TO THE CLAIMS**

**This listing of claims will replace all prior versions, and listings, of claims in the application:**

**LISTING OF CLAIMS:**

1. (Currently amended) A vehicle-mounted magnetoresistive sensor element comprising plural plies of a magnetic layer and plural plies of a nonmagnetic layer, said magnetic layer and said nonmagnetic layer being alternately laminated with each other, said magnetic layer mainly containing Ni, Fe and Co, and said nonmagnetic layer mainly containing Cu,

wherein said magnetic layer has a composition represented by the following formula:



where x and y satisfy the following conditions:

$$x \geq 0.7, y \leq 0.3, \text{ and } (1-x-y) \leq 0.15;$$

and said nonmagnetic layer has a composition represented by the following formula:



where A is an additional element other than Cu, and  $z \geq 0.9$ ;

wherein the thickness  $t_m$  (angstrom) of said magnetic layer and the thickness  $t_n$  (angstrom) of said nonmagnetic layer satisfy the following conditions:

$$10 < t_m < 25, \text{ and } 18 < t_n < 25;$$

AMENDMENT UNDER 37 C.F.R. § 1.116  
U.S. APPLICATION NO. 09/996,580  
ATTORNEY DOCKET NO. Q66805

~~and~~ wherein, when a storage temperature of said magnetoresistive sensor element is T°C, the magnetoresistive sensor element has been previously subjected to heat treatment at a temperature equal to or higher than T°C;

wherein said magnetoresistive sensor has a magnitude of a magnetic field of equal to or more than 100 Oersteds at a point where an integral of magnetoresistance ratio occupies 90% of a total magnetoresistance ~~magnetoresistance~~ ratio in a magnetoresistance curve;

wherein said vehicle-mounted magnetoresistive sensor element further comprises a substrate and a buffer layer, said buffer layer being disposed between said substrate and at least one of said magnetic layer and said nonmagnetic layer, and

wherein said buffer layer is composed of the same material as that of said magnetic layer.

2. (Previously presented) A vehicle-mounted magnetoresistive sensor element according to claim 1, wherein when a unit comprising a laminate of one ply of said magnetic layer and one ply of said nonmagnetic layer is defined as a repeating constitutional unit, the number N of said repeating constitutional units in the magnetoresistive sensor element satisfies the following condition:

$$10 \leq N \leq 40.$$

AMENDMENT UNDER 37 C.F.R. § 1.116  
U.S. APPLICATION NO. 09/996,580  
ATTORNEY DOCKET NO. Q66805

3. (Currently Amended) A vehicle-mounted magnetoresistive sensor element according to claim 1, ~~further comprising a substrate and a buffer layer, said buffer layer being sandwiched between said substrate and said magnetic layer or being sandwiched between said substrate and said nonmagnetic layer,~~ wherein the thickness  $t_b$  (angstrom) of said buffer layer satisfies the following condition:

$$10 < t_b < 80.$$

4. (Original) A vehicle-mounted magnetoresistive sensor element according to claim 1, wherein the heat treatment is performed at a temperature of equal to or higher than  $(T+50)^{\circ}\text{C}$ .

5. (Original) A vehicle-mounted magnetoresistive sensor element according to claim 4, wherein the heat treatment is performed at a temperature equal to or higher than  $200^{\circ}\text{C}$  and lower than or equal to  $300^{\circ}\text{C}$ .